

6390/USSN 10/510,515  
Group Art Unit 1791

- (2) Claims 11-14 under 35 U.S.C. §103(a) over U.S. Patent No. 5,091,032 (Schulz) in view of U.S. Patent No. 6,475,346 (Lefebvre Du Grosriez); and
- (3) Claims 12 and 14 under 35 U.S.C. §103(a) over Riemersma in view of Lefebvre Du Grosriez.

Claim 11 is the sole pending independent claim.

With regard to the §102 rejection over Riemersma, applicants submit that the Examiner is in error since claim 11 requires each of the first and the second cylinders to be rigid, while in Riemersma pressure roll 15 is silicon coated. As set forth in column 6, lines 1-2 and column 4, lines 23-28, the pressure roll 15 and the embossing roll 13 are such that the "first pressure roll 15 adjacent embossing roll 13 is in contact with film 10 and applies pressure to film 10 to put film 10 in intimate contact with the embossing surface 16 of the embossing roll 13 and to conform to the raised knobs on the male patterned embossing surface 16 of embossing roll 13." This is only possible if the outer surface of the pressure roll 15 is resiliently deformable such that the knobs of embossing roll 13 penetrate into the silicon rubber coating layer of pressure roll 15.

6390/USSN 10/510,515  
Group Art Unit 1791

Claim 11 specifically requires that the first and second cylinders are rigid and that when protuberances of the second cylinder press against the smooth surface of the first cylinder, a localized mutual adhesion is provided of the two layers passing through the nip formed by the first and second rigid cylinders.

Applicants submit that the claimed device, based on the first and second rigid cylinder, define a different kind of machine for a different purpose than the device described in Riemersma which is for processing a single layer of plastic material for the purpose of perforating the single layer. Claim 11 defines a device for intermingling and subsequent embossing a pair of layers to form a multilayer web product.

Accordingly, Riemersma does not teach each and every element of the claimed device, e.g., a rigid first cylinder and a rigid second cylinder, and therefore does not anticipate the claimed device within the meaning of 35 U.S.C. §102. Withdrawal of the §102 rejection is respectfully requested.

Concerning the §103 rejection based on Schulz in view of Lefebvre Du Grosriez, applicants respectfully submit that the Examiner is in error when stating that "Schulz

inherently discloses means for pressing the first cylinder and the second cylinder against each other" (page 4 of office action). The Examiner refers to Fig. 3 of Schulz prior to this statement. Fig. 3 shows two patterned embossing rollers 46 and 48. At column 4, lines 47-49, it is stated that "the two rolls have embossing patterns which mesh to join plies 12 and 20 into a two-ply web and at the same time to impart high bulk to that web." It is well known in the art that in such situation the two meshing rolls are not pressed one against the other, but operate in the manner of a pair of meshing gears. The two webs are embossed due to the meshing protrusions, and are not subject to pressure. Thus, Schulz fails to disclose a first rigid cylinder with a smooth surface and a second rigid cylinder with protuberances pressed one against the other. Moreover, contrary to what is stated by the Examiner, two meshing embossing rollers and a roller with protrusions coacting with a smooth rigid roller, as disclosed by Lefebvre Du Grosriez, are not equivalent. In the first case, Schulz, the two rolls are both provided with intermeshing protrusions arranged such that the two plies fed through the embossing nip are deformed mechanically but not compressed, i.e., not laminated to one another. Projections are thus

6390/USSN 10/510,515  
Group Art Unit 1791

formed in the two plies and the two plies are retained one to the other due to the geometric form of the protrusions (in other words the two plies are slightly connected to one another due to the friction between the mutually contacting surfaces of the protrusions of one ply being arranged in the cavities of the corresponding protrusion of the other ply. The next step performed between embossing roller 48 and pressure roller 50 is aimed at calendering the web to make it softer (see column 4, lines 52-54).

In Lefebvre Du Grosriez, a smooth roll and a roll with protrusions co-act in order to laminate two plies together. Connection between the plies is achieved based on the localized high pressure between the two rolls and more specifically between the projections of one roll and the smooth surface of the other, both rolls being rigid.

Thus, the two modes of operation of Schulz and Lefebvre Du Grosriez are conceptually different and are not interchangeable.

Moreover, while in Schulz the pressure roller 50 has a calendering effect on an already embossed pair of plies, the pressure roller 7 of the captioned application has the function of embossing the plies. The plies are already joined by the localized high pressure in the nip

6390/USSN 10/510,515  
Group Art Unit 1791

between rollers 1 and 3, but are substantially smooth. The pressure roller 7 is arranged such that it co-acts with the patterned roller 3 in order to emboss the already joined plies V1 and V2. This is clearly evident from the structural limitations of applicants' claims and clearly differentiates from what is taught by Schulz.

Schulz and Lefebvre Du Grosriez disclose different and mutually inconsistent methods of treating two plies for the purpose of joining them. Schulz teaches to emboss the two plies together between two meshing embossing rollers, without pressure between the rollers, such that a high bulk product is obtained. The product is then calendered for additional softness. Lefebvre Du Grosriez is based on the intermingling effect between a smooth hard roller and a patterned hard roller co-acting to locally fuse the fibers of the two plies. No embossing is added to the plies. There is no logical reason for combining the teachings of Schulz and Lefebvre Du Grosriez, in particular since the two methods are not equivalent or interchangeable.

Riemersma in combination with Lefebvre Du Grosriez also does not teach or suggest the claimed device of dependent claims 12 and 14. Applicants reassert the shortcomings of Riemersma set forth above as well as the

6390/USSN 10/510,515  
Group Art Unit 1791

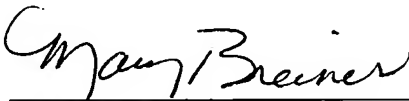
shortcomings of Lefebvre Du Grosriez as set forth above.  
These shortcoming are not overcome by a combination of the  
references as the same critical elements are not taught or  
suggested thereby as to base claim 11.

Applicants respectfully submit that the applied  
art does not teach or suggest the claimed device.  
Accordingly, applicants respectfully submit that the applied  
references do not render the claims obvious within the  
meaning of 35 U.S.C. §103. Withdrawal of the rejections  
under 35 U.S.C. §103 is respectfully requested.

Reconsideration and allowance of the application  
are respectfully urged.

Respectfully submitted,

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